UNIVERSITÀ DEGLI STUDI DI BARI ALDO MORO

Consiglio di Interclasse L-26 e LM-70

General Information		
Academic subject	**Circular economy in food supply chains** **(I.C.: Sustainability of agri-food supply chains)**	
Degree course	Food Science and Technology (LM-70)	
Academic Year	Second	
European Credit Transfer and Accumulation System (ECTS)		3 ECTS
Language	Italian	
Academic calendar (starting and ending date)	September 26th, 2022 – January 20th, 2023	
Attendance	No Compulsory	

Professor/ Lecturer			
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Department and address	Department DiSAAT – Università degli Studi di Bari "Aldo Moro"		
Virtual headquarters	Microsoft Teams		
Tutoring (time and day)	From Monday to Friday 16.00 - 18.00, by appointment only.		

Syllabus	
Learning Objectives	The student will acquire knowledge and skills related to the paradigm of circular economy, the European legislation on the circular economy, the analysis of innovation processes and the methods of designing circular business models in food supply chains, the tools available for food companies to increase competitiveness in the perspective of green economy.
Course prerequisites	Basic knowledge of production economics and economics of agri-food markets
Contents	- **Economy and environment**: the functioning of markets and the causes of their failure, externalities and public goods, limits to economic growth, sustainable development. - **Paradigm of the circular economy**: main characteristics of current linear agri-food system, potential for transition to a circular agri-food system, indicators for measuring circularity. - **Regulatory framework and policies for the circular economy**: European action plan, main environmental certifications schemes (Environmental Product Declaration, Product Environmental Footprints, etc.). - **Circular business models**: Definition of business model, the business model Canvas and its constituent elements, the process of designing a circular business model.
Books and bibliography	• Bateman, I., Pearce, D. W., & Turner, K. (2003). Economia ambientale. Il Mulino, Bologna. • Kovacic, Z., Strand, R., & Völker, T. (2019). The circular economy in Europe: Critical perspectives on policies and imaginaries. Routledge. • MacArthur, F. E. (2019). Cities and circular economy for food. Ellen Macarthur Foundation. • Osterwalder, A., & Pigneur, Y. (2020). Creare modelli di business: Un manuale pratico ed efficace per ispirare chi deve creare o innovare un modello di business. Edizioni Lswr.
Additional materials	Lectures notes and other teaching materials will be furnished by the Teacher during the course.

Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/Self-study hours
Hours			
75	*16*	*14*	*45*
ECTS			
3	*2*	*1*	

Teaching strategy	The course topics will be handled with the help of Power Point presentations. Theoretical discussion will be accompanied by the illustration of specific case studies. Some lectures will be given starting from the presentation of one or more students based on readings of pre-assigned texts. For teaching - student communication and exchange of teaching materials, online platforms will be used (Microsoft Teams)

Expected learning outcomes	The expected learning outcomes, in terms of both knowledge and skills, are provided in Annex A of the Academic Regulations of the Master Degree in Food Science and Technology (expressed through the European Descriptors of the qualification)
Knowledge and understanding	○ Knowledge about the principles of environmental economics, the concepts of sustainable development and circular economy. ○ Understanding the importance of improving the environmental performance as strategic tool for increasing the competitiveness of companies operating in food supply chains.
Applying knowledge and understanding	○ Ability to analyse and assess properly the implementation of circular business models, according to the different structural and organizational contexts of food supply chains.
Soft skills	*Making informed judgements and choices* ○ Ability to contribute effectively to the solution of complex issues related to the improvement of environmental performance in modern companies operating in the food supply chains. *Communicating knowledge and understanding* ○ Ability to discuss effectively on complex issues related to the management of the environmental performances in modern food companies even within a multidisciplinary working group. *Capacities to continue learning* ○ Ability to deepen and update own knowledge about legislation, European policies for the circular economy and innovative solutions capable of increasing environmental sustainability and competitiveness of companies operating in food supply chains.
The expected learning outcomes, in terms of both knowledge and skills, are provided in Annex A of the Academic Regulations of the Degree in Food Science and Technology (expressed through the European Descriptors of the qualification).	

Assessment and feedback	
Evaluation methods	The exam consists of an oral dissertation on the topics developed during the theoretical and theoretical-practical lectures in the classroom and in the laboratory/production plants, as reported in the Academic Regulations for the Master Degree in Food Science and Technology (article 9) and in the study plan (Annex A).

	Students attending at the lectures may have a middle-term preliminary exam, consisting of a written test, relative to the first part of the program, which will concur to the final evaluation and will be considered valid for a year. The evaluation of the preparation of the student occurs on the basis of established criteria, as detailed in Annex B of the Academic Regulations for the Master Degree in Food Science and Technology. The foreign student's profit test can be done in English in the way described above.
Evaluation criteria	*Knowledge and understanding* ○ Being able to argue the principles of environmental economics, the concepts of sustainable development and circular economy with reference to the agri-food system. ○ Being able to argue the importance of improving environmental performance as a strategic tool for increasing the competitiveness of food businesses. *Applying knowledge and understanding* ○ Being able to correctly contextualize real issues related to the implementation of business models capable of increasing the circularity of agri-food companies. *Making informed judgements and choices* ○ Introducing reasonable hypotheses for solving possible problems related to the improvement of environmental performances in companies operating in food supply chains. *Communicating knowledge and understanding* ○ Using technical language properly and correctly in discussing issues related to the management of environmental performances in companies operating in food supply chains. *Capacities to continue learning* ○ Demonstrating a sufficient critical approach in identifying and arguing the theoretical and practical limitations of the current knowledge on management of environmental issues in companies operating in food supply chains.
Criteria for assessment and attribution of the final mark	The evaluation criteria that contribute to the attribution of the final mark will be: knowledge and understanding, the ability to apply knowledge, autonomy of judgment, i.e. the ability to criticize and formulate judgments, communication skills

Additional information	